Chapter 7

Summary and general discussion

> "It's not that easy being green. Having to spend each day the color of the leaves, when I think it could be nicer being red, or yellow, or gold, or something much more colorful like that. It's not easy being green. It seems you blend in with so many other ordinary things, and people tend to pass you over 'cause you're not standing out like flashy sparkles in the water or stars in the sky…. I am green, and it'll do fine. It's beautiful, and I think it's what I want to be." - Song Kermit the Frog *(famous muppet from the Muppet Show and Sesame Street)*

7.1 Introduction

Many scholars have emphasized the importance of studying human values when explaining prosocial behaviours. They distinguished between altruistic and egoistic value orientations. Altruistic value orientations emphasize that individuals are motivated to act prosocially to benefit others. Egoistic value orientations stress the importance of benefiting yourself when acting prosocially. In literature on environmental ethics, various scholars suggested that a third, "biospheric", value orientation is relevant when explaining a special type of prosocial behaviours, namely those in an environmental context (i.e., ESB). This orientation is typically seen as a subdimension of the altruistic value orientation. People with a biospheric value orientation will mainly base their decision to act proenvironmentally or not on the perceived costs and benefits for the ecosystem and biosphere as a whole. However, most scholars thus far failed to empirically distinguish between a biospheric and an altruistic value orientation. The studies presented in the preceding chapters investigated whether a biospheric value orientation could indeed be discerned from an altruistic value orientation. Subsequently, I examined how value orientations were related to environmental beliefs, personal norms and ESB. In this final chapter, I will summarize the main results and discuss the implications of these studies.

7.2 Do we value "the biosphere" in its' own right?

Most studies fail to show a distinction between an altruistic and a biospheric value orientation (Bardi & Schwartz, 2003; Corraliza & Berenguer, 2000; McCarty & Shrum, 1994; Nordlund & Garvill, 2002; Stern & Dietz, 1994).

Generally, only two value orientations are found, that is, self-transcendent versus self-enhancement (Schwartz, 1992; Stern, et al., 1998). Arguably, biospheric values are part of the self-transcendent dimension, because valuing nature is part of valuing the welfare of all people. However, results of this thesis show that the distinction between altruistic and biospheric value orientations is valuable. In Chapter 2, I reported three studies aimed to examine whether an egoistic, altruistic and biospheric value orientation could be distinguished empirically by using an adapted value instrument based on Schwartz's value scale (1992). The study reported in Chapter 3 further examined whether this distinction was validated in five different countries. The results of both chapters provided clear support for the reliability and validity of the value instrument. All studies replicated the distinction into three value orientations. The resulting scales had sufficient internal consistency. Furthermore, egoistic, altruistic and biospheric value orientations were differently and uniquely related to general and specific environmental beliefs and ESB.[11] In most cases, egoistic value orientations were negatively related to proenvironmental beliefs and ESB, while altruistic and biospheric value orientations were positively related to proenvironmental beliefs and ESB. And, in some cases, including biospheric value orientations indeed explained more variance when explaining ESB than altruistic value orientations alone, suggesting that biospheric value orientations can indeed be distinguished from an altruistic value orientation. In conclusion, the value instrument introduced in this thesis is a valid and comprehensive instrument to measure the three types of value orientations.

The findings correspond with literature on environmental ethics, in which it is argued that besides a self-enhancement (i.e., egoistic) versus self-transcendent (i.e., altruistic) value orientation, a third value orientation should be distinguished that emphasizes the value of nature (Leopold, 1949; Naess, 1989; Reid, 1962; Singer, 1973). However, most scholars did not find empirical support for the distinction into three value orientations. At least two explanations for this apparent discrepancy are possible. First, common value instruments were not able to distinguish a separate biospheric value orientation because they included a few biospheric values only among many altruistic values. For example, Schwartz (1992) only included two biospheric values into his 56 items value scale, hereby making it extremely difficult to set apart

a biospheric value orientation from the more general self-transcendent dimension. Moreover, my value instrument focuses on one dimension (i.e., self-enhancement versus self-transcendent) instead of two dimensions (i.e., self-enhancement versus self-transcendent, and openness to change versus conservatism). In contrast, other instruments who specifically tried to discriminate between an egoistic, an altruistic and a biospheric value orientation (Stern & Dietz, 1994; Stern et al., 1998) also included values belonging to the openness to change and conservatism dimension of Schwartz's value scale. Thus, I added extra biospheric values and I only included values from the self-enhancement and self-transcendent dimension in my value instrument. Therefore, it was more likely to find a separate biospheric value orientation through confirmatory factor analysis.

Second, the distinction of a separate biospheric value orientation from the more general altruistic one could also be due to a gradual change in values. The significance of values, and therefore the occurrence of separate value orientations, is often the result of something people "lack". For example, people especially endorse freedom when they just have been suppressed by an occupying force. Or, someone's health is more strongly valued when they fall ill.[12] The same may be true for valuing the environment: when people do not significantly face environmental problems or are not aware of these problems, they might not have passed a threshold which activates the occurrence of a separate biospheric value orientation. Thus, maybe a separate biospheric value orientation is a development of recent years, because people now do face these problems.

Chapter 3 provides some first support that the distinction of a biospheric value orientation from an altruistic value orientation could be universally applicable. However, environmental awareness is relatively high in EU countries (European Commission, 2005; 2006; Franzen, 2003) and therefore it seems more likely that these countries have succeeded more in generating a clear distinction in general public consciousness between valuing nature in itself and valuing nature because of the human benefits it provides (e.g., Stern, 2000). In other countries this ideology may be less developed. Therefore, it would be interesting to further validate this short value scale in countries or within specific groups in which people are hardly aware of the problems related to the environment or in which non-human aspects of the environment

are valued less in their own right in order to test whether a biospheric value orientation can be distinguished in these countries as well.

To further validate whether altruistic value orientations could be divided into an altruistic and a biospheric part, I examined how these value orientations were related to general and specific environmental beliefs and ESB. In most studies (Chapter 2, 3 and 5), the altruistic value orientation did not contribute significantly and uniquely to the explanation of environmental beliefs and ESB when the biospheric and egoistic value orientations were controlled for. This result may be due to the fact that altruistic and biospheric value orientations were correlated. Apparently, altruistic and biospheric values play a similar role in many of the behaviour-specific beliefs and ESB that I included in my studies. Both value orientations were related to these beliefs and behaviours, but in most cases biospheric values were more strongly related to these variables than were altruistic value orientations. Moreover, results of Chapter 6 showed that altruistically and biospherically oriented people expected quality of life-indicators to change in the same direction when implementing a transport pricing policy aimed at reducing car use. However, people endorsing biospheric and altruistic value orientations differed in the extent to which these indicators would be affected by the policy. The biospheric value orientation showed strong correlations with expected quality of life-changes resulting from transport pricing, whereas the altruistic value orientation showed weak or even no correlations with changes in these quality of life-indicators. Biospheric value orientations therefore seem more important when it comes to explaining environmental beliefs and ESB than altruistic value orientations.

There was one clear exception in which altruistic and biospheric value orientations were related to ESB in the opposite direction, namely in the case in which respondents had to choose between altruistic and biospheric goals. Results showed that when altruistic and biospheric values conflicted with one another, as in the case in which respondents were forced to choose between donating either to a humanitarian or an environmental organization (Chapter 2), both altruistic and biospheric value orientations appeared to contribute strongly to explaining the choice of donation. The contribution of altruistic and biospheric value orientations were in opposite directions: The more people were altruistically oriented, the more they chose to donate to humanitarian organizations and the more people valued the biosphere and environment, the

more they preferred to donate to environmental movements. This result provides further evidence that altruistic and biospheric value orientations are separate constructs. It is likely that altruistic and biospheric values are uniquely and differently related to beliefs and ESB in other choice situations as well. In fact, all three value orientations can contribute uniquely to the explanation of beliefs and ESB. For example, buying either "normal", fair-trade or organic food, or choosing between a liberal, social or "green" political party, could induce a similar conflict between egoistic, altruistic and biospheric values. Therefore, in some cases there may be no unique contribution of the three value orientations to the explanation of behaviour-specific beliefs and ESB, while in other cases egoistic, altruistic and biospheric value orientations may all be uniquely but differently related to these variables. Future research should examine the relationships between conflicting egoistic, altruistic and biospheric value orientations, environmental beliefs and behaviours in order to further increase the construct validity of the three value orientations.

7.3 The norm activation model: Relationships between value orientations and prosocial behaviour

This thesis mainly focused on the relationships between value orientations, prosocial beliefs and behaviours in an environmental context. ESB was considered as a special type of prosocial behaviour, because ESB entails that people benefit others (or the environment) whereas often no direct individual benefits are gained from engaging in these types of behaviours. In Chapter 4, non-environmental prosocial behaviours were included as well to be able to generalise results to other, social, contexts. Therefore, from here on, I will refer to ESB as prosocial behaviour.

In Chapter 5, I specifically investigated how egoistic, altruistic and biospheric value orientations were related to prosocial behaviours in an environmental context. In this thesis, acting prosocially is typically regarded as moral behaviour, that is, people do not mainly behave prosocially because they are maximizing utility but because they want to act based on what is best for other people or the environment. Normative models explicitly deal with explaining these kinds of behaviours, but do not always include values.

Therefore, I integrated egoistic, altruistic and biospheric value orientations into the Norm Activation Model (NAM).

In order to include the three value orientations into the NAM, I first had to explore how the model variables of the NAM were related to each other, because I found different interpretations of these relationships in literature (Chapter 4). In essence, two interpretations of the NAM have been postulated. Some scholars suggest that awareness of consequences (AC) precedes ascription of responsibility (AR), AR is antecedent of personal norms (PN), and PN influences behaviour (i.e., mediator model). Others assume that the influence of PN on prosocial behaviour is moderated by AC and AR. In general, the findings in Chapter 4 as well as in Chapter 5 support the NAM as a mediator model. The six studies reported in these chapters convincingly replicated the findings in different samples with a variety of prosocial behaviours in social as well as in environmental contexts. Results indicated that one first has to be aware of the negative consequences of behaving anti-socially before feeling responsible to engage in prosocial behaviour or acknowledging that an own contribution may be useful. In turn, responsibility feelings increase feelings of moral obligation to act prosocially and these feelings of obligation induce prosocial behavioural intentions and behaviours. These results concur with studies proposing that awareness of consequences affect ascription of responsibility, and that responsibility indirectly affects intentions and behaviour, through personal norms (Black, et al., 1985; Diamond & Kashyap, 1997; De Ruyer & Wetzels, 2000; Steg et al., 2005; Stern, 2000). A mediator model seems theoretically plausible as well, because it is difficult to feel responsible to act prosocially or to think about the effectiveness of possible actions without knowing whether not acting prosocially is a problem. Subsequently, acting in accordance with a personal norm seems unlikely when one does not feel personally responsible for either the problems or for its' solution. Therefore, problem awareness and responsibility play an important role in the development of personal norms in the first place. And, only when these conditions are met, PN will affect prosocial behaviour in accordance with these norms.

The value belief norm model (VBN; Stern, 2000) interprets NAM as a mediator model and proposes a causal chain which moves from relatively stable and general values to specific beliefs (i.e., AC and AR), PN and

proenvironmental actions. Stern argues that egoistic, altruistic and biospheric value orientations may all be related to ESB, although mostly indirectly, through AC, AR and PN. Therefore, in Chapter 5, I included egoistic, altruistic and biospheric value orientations in the NAM to examine whether and how these value orientations should be incorporated into the model. As expected from the VBN model, AC partially mediated the relationship between value orientations and AR. However, results showed that relationships between value orientations and prosocial behaviour are not as simple as suggested in the VBN model. Although VBN model assumes that value orientations are more strongly related to AC than to AR, PN, and finally to prosocial behaviour, results of my studies suggest that values are also directly and strongly related to PN and behaviour. For example, the biospheric value orientation contributed strongly to the explanation of PN when AC and AR were controlled for in both studies reported in Chapter 5. These strong direct relationships make sense as well: biospheric values reflect individuals' level of concern about collective interests and the biosphere, and consequently, they may especially be directly related to PN (e.g., Nordlund & Garvill, 2002; 2003; Stern et al., 1999; Stern, 2000). These results are also in line with Schwartz's (1977) assumptions that PN may be rooted in internalized values. Thus, value orientations are indeed an important addition to the NAM, but the relationship between value orientations and ESB seems to be more complex than suggested by Stern's VBN model (2000). In contradiction to the VBN model, results of these studies suggest that egoistic, altruistic and biospheric value orientations have considerable leverage both indirectly as well as directly through PN and prosocial behaviour.

The NAM variables especially appeared to be strong predictors when explaining low-cost prosocial behaviours, for example demonstrating against plans of the local community for the establishment of a methadone point in one's residential area (Chapter 4). The NAM was less successful in explaining behaviours which are typically characterized by strong constraints, for instance, when behaviour change is rather costly in terms of effort, convenience, money or time, such as reducing car use (Chapter 4 and 5). Diekmann and Preisendörfer (2003) used a hypothesis by Kirchgässner (1992) which states that concerns with gain (e.g., egoistic values) will quickly displace concerns with norms (e.g., altruistic or biospheric values) when costs

increase. This assumption is called the "low-cost hypothesis" of normative behaviour. Results of this thesis provide extra support for this assumption. Other studies support the hypothesis that high-cost behaviours are less strongly based on moral considerations as well (e.g., Bamberg & Schmidt, 2003; Guagnano, et al., 1995; Hunecke, et al., 2001). However, this does not mean that normative considerations are not influential at all in high-cost situations. Rather, they play a less important role than other, egoistic, considerations. Indeed, normative, and more specifically, altruistic and biospheric values may at times be (weakly) associated with high-cost behaviour (e.g., Bamberg & Schmidt, 2003; Gatersleben, Steg, & Vlek, 2002; Nilsson & Küller, 2000).

7.4 Value orientations, morality and prosocial behaviour: Acting "mean" or "green"?

Results reported in this thesis contribute to the present discussion about whether prosocial behaviours are only selfish in nature or are also subject to moral considerations. In general, the results strongly support the second view. "Unselfish" value orientations and PN were powerful in explaining a diversity of prosocial behaviours in the social as well as in the environmental context (i.e., ESB). Thus, next to egoistic value orientations, I found strong evidence that value-based (altruistic and biospheric) normative considerations play a crucial role when explaining prosocial behaviours. Yet, people do not always act in congruence with their altruistic and biospheric values. Why do some people persist on driving by car, why don't they donate blood, and why do they not accept policies in favour of the public good, although they do believe that doing the right thing for others and the biosphere is important?

When the three value orientations are incompatible, normative considerations can play a less prominent role in explaining prosocial behaviour. As shown during this thesis, egoistic, altruistic and biospheric value orientations are main motives to act prosocially: A person may reduce car use because the costs are too high (egoistic), because it endangers the health of people (altruistic), or because it harms plants and animal species (biospheric). Therefore, in theory, people with an altruistic or biospheric value orientation do not act necessarily more prosocially than people with a predominating egoistic value orientation; this depends on the individual costs and benefits of behaving prosocially (De

Groot & Steg, 2007a; Stern, 2000). However, in general, research shows that prosocial beliefs and behaviour appear to be positively related to altruistic and biospheric values and negatively to egoistic values (e.g., Honkanen & Verplanken, 2004; Karp, 1996; McFarlane & Boxall, 2003; Stern & Dietz, 1994; Steg, et al., 2005; Stern, et al., 1998; Van Vugt, et al., 1995), probably because much prosocial behaviour requires individuals to restrain egoistic tendencies. The results reported in Chapter 2, 3, 5 and 6 mainly confirm that egoistic values conflict with altruistic and biospheric values, that is, egoistic values are mostly negatively and altruistic and biospheric values are mostly positively related to prosocial beliefs and behaviours. Sometimes altruistic and biospheric value orientations conflict (Chapter 2), but this is less often the case, as I explained previously.

The conflict between values seems problematic, because research shows that *a priori* people act more on egoistic value orientations and less on altruistic and biospheric value orientations, especially when behavioural costs are relatively high (e.g., Lindenberg & Steg, 2007; Moore & Loewenstein, 2004). Altruistic and biospheric values depend more strongly on external support, be it through institutions, moralization (see Lindenberg, 1983) or explicit disapproval for not following these values or norms (see Tangney & Dearing, 2002). In other words, these value orientations need the most support. In the following sections, I will present two ways that may strengthen the altruistic and biospheric value orientation, hereby promoting prosocial behaviour.

7.5 How to promote prosocial behaviour: Acting "green" instead of "mean"

There are two possibilities to enhance stable prosocial behaviour. The first way is by making egoistic "anti-social" value orientations compatible with the "prosocial" altruistic and biospheric value orientations. The second way is by strengthening the altruistic and biospheric value orientations and thus making normative considerations more dominant, which will reduce the relative strength of egoistic value orientations (Lindenberg & Steg, 2007). In the last section, I will consider these options and translate it to possible interventions, policy implications, and follow-up research.

Reducing conflict between egoistic, altruistic and biospheric value orientations. The first way to support prosocial behaviour is by reducing conflict between altruistic and biospheric value orientations that promote prosocial behaviour and egoistic value orientations that demote this behaviour. Interventions could be aimed at rendering egoistic value orientations less incompatible or even compatible with normative goals, that is, making prosocial behaviour more attractive via the use of incentives, and/or behaviour with a negative social or environmental impact less attractive by the use of disincentives. For example, reducing car use will benefit society, by reducing noise in public areas (i.e., altruistic) or reducing CO_2 emissions (i.e., biospheric), which makes acting on these two value orientations relevant. However, it can conflict with egoistic values (e.g., "driving a car makes me happy"; "reducing car use will limit my personal freedom"; "reducing car use will cost a lot of extra time"). Chapter 5 provided support that next to biospheric value orientations, egoistic values indeed play a crucial role when explaining environmental beliefs and personal norms to reduce car use. Therefore, it is important to make these egoistic values compatible with normative considerations, for example by emphasizing the extra time lost in congestions when using the car, or focussing on the money saved by cycling short distances.

Even when acting egoistically concurs with acting prosocially, it seems too fickle to act solely on the basis of self-interest for achieving stable prosocial behaviour. That is, when people make their prosocial behaviour dependent only on cost minimization, they will often not perform the behaviour as soon as the costs exceed the benefits of acting prosocially (e.g., as soon as the costs of reducing car use are relatively more than of not reducing car use). Acting on altruistic or biospheric values provides probably a more stable basis for acting prosocially (Lindenberg & Steg, 2007). Therefore, one important consideration when making the egoistic values more compatible with altruistic and biospheric values is that egoistic values should *always* be linked to normative (altruistic and biospheric) aspects because it is ultimately the altruistic and biospheric value orientation that needs to be strengthened to reach stable prosocial behaviour (Lindenberg & Steg, 2007). For example, Steglich (2003) showed that sanctions which are seen as supporting a personal norm strengthen this norm, whereas sanctions seen as (dis)incentives strengthen egoistic

motives. It thus matters how for example incentives are publicly handled. Similarly, Frey (1997) showed that financial incentives can lower or totally crowd out intrinsic motivation, even of those not affected by financial incentives.

Strengthening the altruistic and biospheric value orientations. A way to strengthen altruistic and biospheric value orientations is by supplying extensive causal knowledge on the importance of acting prosocially. Because prosocial values are highly abstract (What does it mean "to be helpful?" or "to protect the environment?"; see e.g., Maio & Olson, 1998), it is very likely that thorough instrumental knowledge on the link between acting on these values and the society one lives in is crucial for stabilizing altruistic and biospheric values and hereby acting morally correct against the *a priori* stronger egoistic tendencies.

Often, the knowledge supplied by media and governments assumes that people are mostly sensitive to egoistic values, not to altruistic or biospheric values. For example, information provided by the government to introduce policies aimed at reducing CO_2 emissions by reducing car use is too often focussed on personal gains and losses (e.g., reducing car use causes reductions of congestions which will gain time and increase traffic safety; you will loose money when you still travel by car because we increase fuel levies, kilometres charges and tolls). Governments hardly explain *why* people should reduce their car use (e.g., Car use is a strong contributor of CO_2 emissions and CO_2 emissions contribute strongly to environmental pollution; Behavioural change is necessary to reduce these emissions, because technical improvements alone have proven to fail). At this moment, it seems that there is more or less a focus on individual gains and losses and that altruistic and biospheric values are put into the background (e.g., "by the way, if all these "self-interest" arguments do not pull you over the line, reducing car use is probably also better for the environment."). Relevant knowledge includes for example knowledge of the consequences related to not behaving prosocially and ascription of personal responsibility to these consequences and to the solutions of these consequences. Results of Chapter 4 and 5 support that this kind of knowledge is most important when acting upon normative concerns.

Another way to strengthen altruistic and biospheric values is to make them

subject to a process of *moralization* (see Lindenberg, 1983; Rozin et al., 1999). During this process the values are clearly linked to morally supporting emotionsranging from "you are a bad person if you act against biospheric values and norms" all the way to physical disgust as reaction to deviance, say to somebody who pours turpentine down the toilet (Lindenberg & Steg, 2007). Both causal knowledge and moralization are usually the result of social movements and government campaigns. For example, on a local level, commitment, that is, a pledge or promise to act prosocially, may be a way to moralize prosocial behaviour (Katzev & Johnson, 1983; Pallak & Cummings, 1976). Voluntary commitments activate personal norms to act prosocially and enhance the chance that the norm will be internalized (Osbaldiston & Sheldon, 2003). Therefore, a follow-up of the research conducted in my thesis would be to examine the potential impact of incentives, knowledge and moralization on the disposition to act on one's altruistic or biospheric values (i.e., normative considerations).

7.6 Conclusion: It's not easy being green

In conclusion, results of this thesis strongly suggest that people do not act prosocially solely on the basis of egoistic value orientations. Both altruistic and, in the case of ESB, biospheric value orientations are important as well when explaining these types of behaviours. Furthermore, I showed that the three value orientations were directly as well as indirectly strongly related to moral considerations and behaviours. The results imply that interventions to promote prosocial behaviours must not only be based on calculated utility (egoistic value orientations), but also on morality. Interventions to promote stable prosocial behaviour should for example be aimed at strengthening morality and thus strengthening altruistic and biospheric value orientations, and at the same time, lowering the competition of incompatible egoistic values. I hope to have contributed with this thesis a more fully and thorough understanding of determinants affecting prosocial behaviours. Knowing whether and how egoistic, altruistic and biospheric value orientations are related to (prosocial or environmental) beliefs, intentions and behaviour may enhance efficient promotion of prosocial behaviours, and, therefore making it easier for people being green.

Endnotes

[1] ESB is defined based on the impact of the behaviour on the environment, which not necessarily corresponds with human perceptions, e.g., people may not know or acknowledge the environmental impact of their behaviour.

[2] Beliefs refer to evaluations of consequences of ESB. In the current study, we employ a broad definition of beliefs, including environmental concerns, problem awareness, ascription of responsibility, and attitudes.

[3] Full results of the study are reported in Steg, Drijerink and Abrahamse (2005). Here, we focus on the development and testing of the value instrument, which has not been reported in Steg et al. (2005).

[4] Exploratory factor analyses through principal component analysis as well as confirmatory factor analysis through structural equation modeling (Lisrel 8; Jöreskog & Sörbom, 1993) also suggest the distinction between three factors, which implies that we not only replicated our results in different samples, but by using different types of data analyses as well. We prefer to report the data provided by MGM, because it a) is the most robust method for small sample sizes, and; b) provides clear information about how the model may be improved.

[5] This study was part of the EU funded project 'ASsess Implementations in the Cities of Tomorrow' (ASI; EVG3-CT-2002-80013).

[6] This article is not aimed at exploring differences between countries. We elaborate on the distinction of value orientations in different countries and cultures extensively in another article (De Groot & Steg, 2007).

[7] Snowball method may not yield fully representative samples for countries. This should be kept in mind when interpreting results. This would be a problem when considering cross-country comparisons in importance ratings of values, awareness of consequences and personal norms. However, this is not the purpose of present study. Furthermore, socio demographics (i.e., income,

gender and age) were hardly related to value orientations, awareness of consequences or personal norms. Thus, it is not likely that the sampling procedure seriously affected the results of this study.

[8] We did not report results of Maximum-Likelihood factor analysis, because MGM is a more robust method and is less sensitive for small sample sizes (e.g., MacCallum, Widaman, Zhang, & Hong, 1999; Stuive et al., 2006; for a discussion of the serious problems encountered with hypothesis testing in factor analysis see McCrae, Zonderman, Costa, Bond, & Paunonen, 1996).

[9] Full questionnaires of all studies are available from the first author.

[10] This study was part of the EU funded project 'ASsess Implementations in the Cities of Tomorrow' (ASI; EVG3-CT-2002-80013).

[11] As from now, ESB and prosocial behaviour refer both to behavioural intentions as well as self-reported behaviours to reduce space and repetition throughout Chapter 7. The differences, advantages and disadvantages of using intentions and self-reported behaviour instead of actual behaviour are extensively described in Chapter 4 and 5.

[12] This example is based on a quote of dr. Thomas Fulles, Gnomologia, 1732, British physician (1654 - 1734).